GENERAL AGREEMENT ON
TARIFFS AND TRADE

RESTRICTED
COT/W/115/Add.2
24 September 1969
Special Distribution

Cotton Textiles Committee

COTTON TEXTILES 1962-1968

Abstract of Cotton Industry Data and General Observations on Developments in the Cotton Sector Submitted by Governments

SECTION IV

Abstract of Cotton Industry Data and General Observations on Developments in the Cotton Sector Submitted by Governments[1]

Except in the case of statistics on capacity utilization which have in some cases been supplemented, as indicated, by statistics made available by IFCATI, the information contained in this section is a summary of the data supplied by governments in response to Part II of the questionnaire on adjustments in the cotton sector, COT/W/110 - a copy of which is appended at the end of this section. Data may not always be comparable as between countries and with information included elsewhere in the paper because of differences in definitions used and coverage of the statistics.

Also included in this section are any general observations on developments in the cotton textiles sector made by governments in their response to the questionnaire.

Contents

[1] The questionnaire was sent to both importing and exporting countries. As of 15 September 1969, replies had been received from all of the Group I countries except Denmark, and from six of the Group II countries - Hong Kong, India, Pakistan, Republic of China, Republic of Korea and Turkey.

GROUP I COUNTRIES

AUSTRALIA

Employment

In cotton spinning and weaving mills:

Year	Male	Female	Total
1961/62	4,286	4,694	8,980
1965/66	4,823	5,287	10,110
1966/67	4,694	5,050	9,744
1967/68	..	..	..

1970 estimate: no change in the number of workers.

Firms

Since 1960, twenty-seven mills have been closed down and five new mills have been built.

Mills operating in 1968: seventy.

Equipment

	1960	1968
Cotton system spindles (for spinning cotton and man-made fibres)	237,000	256,000
Cotton looms	1,606	..1/

1/ Decrease estimated.

The number of cotton spindles and looms in the cotton industry in 1970 is expected to remain at the same level as at present.

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	58.5	79.9	83.9	83.9	..
Weaving	54.0	70.1	70.6	74.7	..

Productivity

Not available.

Investment

Value of additions to and replacements in cotton mills made during the year:

(US$'000)

Year	Land and buildings	Plant and machinery
1961/62	448	3,972
1965/66	2,251	3,123
1966/67	647	3,814
1967/68	..	..

Note: With the exception of 1962/63, when new fine-combed yarn spinning capacity at the investment cost of $2.2 million and $7.2 million, respectively, was installed, the bulk of investment was geared to modernization of existing plant and equipment.

Structure of the industry

(a) Official statistics are not available. It is estimated that about 90 per cent of cotton spinning capacity is concentrated in five firms.

(b) It is estimated that about 90 per cent of spinning capacity in both 1960 and 1968 was controlled by vertically integrated concerns which take processing up to the finishing stage.

In cotton weaving about two thirds of the capacity in 1960 was controlled by weavers controlling both spinning and finishing.

General observations

As the answers to questions in Part II indicate, the Australian cotton textile industry has changed little in the period 1960-1968.

AUSTRIA

Employment

	1962	1966	1967	1968
Manual:	19,045	15,036	13,801	13,471
Female	11,669	8,836	8,029	7,603
Male	7,376	6,200	5,772	5,868
Non-manual:	3,484	3,582	3,447	3,393
Female	1,002	1,055	1,012	1,030
Male	2,482	2,527	2,435	2,363
Total:	22,529	18,618	17,248	16,864

Firms

1968: number of firms - seventy
number of mills in operation - eighty-seven
number of mills closed down since 1960 - thirty-six.

Equipment

1968: active spindles - 443,980
active looms - 7,102

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	66.8	69.1	68.3	66.3	..
Weaving	57.8	67.5	68.9	67.0	..

Productivity

Not available.

Investment

Not available.

Structure of the industry

Degree of integration	1960		1968	
	Number	% of total capacity	Number	% of total capacity
Spindles controlled by spinners only	154,478	26.1	155,368	35.0
Spindles controlled by spinners and weavers	437,984	73.9	288,612	65.0
Looms controlled by weavers only	3,197	26.8	2,300	32.4
Looms controlled by weavers and spinners	8,754	73.2	4,802	67.6

Size structure of firms, 1968:

	No. of firms	No. of spindles or looms	% of total capacity
Spinning: firms with less than 30,000 spindles	12	(186,828)	42.1
30,000-100,000 spindles	7	(257,152)	57.9
Weaving: firms with less than 100 looms	38	(1,343)	18.9
100-500 looms	13	(2,822)	39.7
more than 500 looms	4	(2,937)	41.4

Percentage of the total capacity concentrated in the five largest firms:

Weaving mills: 3,419 looms, 48.2 per cent of the total
Spinning mills: 196,108 spindles, 44.2 per cent of the total

General observations

"The Austrian textile industry has made efforts to follow the changes in textile technology. Whether this will be possible in the future will depend on the profitability of the enterprises, by which the amount of investments is determined.

"The future development of the cotton textile industry will be influenced by the transition from woven fabrics to knitted fabrics which has been in progress for decades, and which has become extremely accelerated at present. A steadily increasing number of branches of the processing industry is being supplied with knitted fabrics; at the same time there is a conversion from cotton to man-made fibres, the quality of which has been improved by the process of texturizing.

"International and domestic competition have been rendered extremely keen not by enterprises whose competitiveness is determined by the application of the one, two or three shifts system but by imports of goods at prices not justified from the calculation point of view. The calculation of prices not covering production costs is apt to cause serious market disruptions especially if the pricing is based on elements which are not in conformity with the principles of normal calculation in a free enterprise economy. If these elements are abolished, the artificial advantages used in the formation of prices must either lead automatically to a modification of the price policy or to the exhaustion of the capital of those enterprises whose competitiveness is based on low prices. It is a well-known fact that market disruptions can be caused not only by imports of relatively large quantities of goods but also by imports of small quantities of low-priced goods. It would be in the interest both of exporters and importers if a long-term expansion of international trade in cotton textiles were brought about not by intensification of competition by means of pegged prices but by the general stabilization of the price level."

CANADA

Employment

		1962	1966	1967	1968
Total		17,972	16,399	17,424	15,591
Of which:	Male	12,462	11,040	11,674	10,446
	Female	5,510	5,359	5,750	5,145
	Production workers	14,835	13,376	14,288	12,785
	Others	3,137	3,023	3,136	2,806

Estimate for 1970: 16,300 employees.

Firms

Number of firms and mills in operation as of 31 December	1960	1967	1968
Firms	18	13	13
Mills	39	35	31

Mills built since 1960: 4
Mills closed since 1960: 12 (8 mills closed and 4 are no longer classed as cotton mills)

Equipment

	In place at 31 December:			
	1962	1966	1967	1968
Spindles				
Total	776,912	863,626	800,000	700,000
Installed since 1960		172,416		
Of which installation:				
for new capacity	..	51,636	2,160	3,360
for replacement	..	10,080	-	2,000

Equipment (cont'd)

	In place at 31 December:			
	1962	1966	1967	1968
Looms				
Total	12,024	12,544	11,600	10,300
Installed since 1960		3,157		
Of which installation:				
for new capacity	..	788	-	1
for replacement	..	36	229	14

Estimate for 1970: 765,000 spindles
11,100 looms

Utilization - (Three shifts, 6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	68.0	86.7	73.3	79.4	..
Weaving	72.9	87.7	76.6	84.6	..

Labour productivity

	1962	1966	1967	1968
Spinning				
Domestic cotton yarn production (metric tons)	76,236	75,758	77,279	69,551
Number of workers	14,835	13,376	14,288	12,785
Metric tons per worker	5.14	5.66	5.41	5.44
Total employees	17,972	16,399	17,424	15,591
Metric tons per employee	4.24	4.62	4.44	4.46
All manufacturing activity in cotton sector				
Value added in cotton industry at current prices ($000)	104,163	114,212	..	..
Cotton industry selling price index (1956 = 100)	99.9	101.6	..	..
Value added in constant prices (1956 = 100) ($000)	100,451	107,808	..	..
Value added in constant prices per worker ($)	6,771	8,060		

Investment

Capital and repair

(Thousand dollars)

	1962	1966	1967	1968*
Total expenditures	16.899	29.554	21.661	10.916
of which:				
Capital - Construction expenditures	1,028	6,727	5,023	1,374
- Machinery expenditures	6,796	14,829	7,324	3,537
Repair - Construction expenditures	1,858	1,292	2,072	1,232
- Machinery expenditures	7,217	6,706	7,242	4,773

Note: New capital and repair expenditures, not gross fixed investment.

*Total of above expenditures over the years 1960 to 1968 inclusive $168.8 million.

Structure of firms (mill combines) and individual units

		At 31 December, 1967: (per cent of total capaci	
		Spinning	Weaving
(a)	Firms in operation with:		
	less than 30,000 spindles, 100 looms	8	-
	30,000-100,000 spindles, 100-500 looms	11	10
	over 100,000 spindles, 500 looms	81	90
(b)	Mills in operation with:		
	less than 10,000 spindles, 50 looms	2	-
	10,000-30,000 spindles, 50-100 looms	23	1
	over 30,000 spindles, 100 looms	75	99

(c) The three largest firms represented 88 per cent of total capacity in 1967 and the five largest firms represented 95 per cent.

	1960		1967	
	Spindles	Looms	Spindles	Looms
(d) Firms				
Capacity controlled by:				
Spinners and doublers	14,016		60,300	
Spinners, doublers, weavers and finishers	783,024	13,145	743,396	12,576
Total	797,040	13,145	803,696	12,576

General observations

Fibre development and consumer preference

"In recent years, important and rapid changes in fibre development and growing consumer preference for 'easy care', 'durable press' or 'permanent press' products have had a marked influence on the cotton textile industry. Man-made fibres and blends of man-made fibres and cotton have gained a rapidly growing share of the traditional cotton market in many countries. These goods are produced, with some modifications to equipment and technology, by cotton mills and their employees. In most of the world's industrialized countries the production of such cotton substitutes is now carried on side by side with that of cotton products.

"In Canada, there is an additional inducement to make the change as rapidly as market factors will allow, because the Canadian market for cotton fabrics has been so heavily pre-empted by imports of low-priced cotton goods from various sources. For example, the Canadian cotton textile industry formerly produced millions of yards annually of combed cotton broadcloth shirtings and blouse fabrics. This market is now almost entirely supplied by imports from the low-cost countries. In recent years, however, both imports and domestic production of cotton piece-goods, have shown a declining trend. This results partly from a considerable increase in imports of finished garments and partly from a reduced demand for cotton goods as a whole.

"The Canadian cotton textile industry has taken steps to reduce its dependence on the manufacture of cotton fabrics by re-equipping certain mills and retraining workers to produce the man-made fibre/cotton blends. Some older mills that were unfit for economic conversion were closed. Some new plants were built. The Canadian cotton industry now consists in the main of technologically efficient production units. However, despite the fact that a large proportion of the Canadian textile market has traditionally been supplied by imports, a rapid influx of low-priced imports of man-made fibre/cotton fabrics and products concentrated in the staple or most popular lines, has forced domestic mills to diversify to the point where operations are uneconomically fragmented. Moreover, the prices of

Canadian goods have had to be reduced in an endeavour to compete with the very low prices of some imports to a point where profitability has been rendered unusually low. These conditions have retarded the conversion of plants, equipment and workers. Mills and employees that would otherwise have been converted are still engaged in the production of cotton goods but on a steadily diminishing scale. Because many of the principal mills in the Canadian cotton textile industry are located in small towns where alternative employment opportunities are limited or non-existent, the difficulty faced by the industry in being unable to offset declining production of cotton goods by achieving conversion and expansion of facilities for man-made fibre and cotton blend goods at an adequate rate results in particular hardship to workers involved."

BELGIUM

Employment

	1962	1966	1967	1968
Total	30,149	25,049	22,500	..
Of which:				
Manual - Male	16,928	14,280	12,748	..
Female	10,903	8,356	7,450	..
Non-manual -	2,318	2,413	2,301	

Firms

	1962		1966		1968	
	Firms	Mills	Firms	Mills	Firms	Mills
Spinning	45	60	34	47	29	45
Weaving	204[a]	241[a]	159[b]	175[b]	..	..

[a] 1960 figures.

[b] 1967 figures.

Equipment

	1962	1966	1967	1968
Number of spindles in place: (1,000)	1,178	1,001	960	943
Number of looms in place:	19,552	17,820	17,292	17,292
of which automatic:	11,354	12,972	13,144	(13,144)

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	67.4	66.4	71.3	66.7	..
Weaving	..	..	..	..	..

Productivity

Labour productivity index (1960 = 100)

	1960	1968
Spinning	100	147
Weaving	100	157

Investment (Cotton and man-made fibres)

Gross fixed investment (Thousand dollars)

	1962	1966	1967	1968
Spinning	7,217	5,325	4,100	..
Weaving	3,765	5,263	5,677	..

Total investment over the years 1960 to 1967 inclusive $88.7 million.

Structure of the industry

(a) Capacity controlled in:

(per cent)

	1961	1967
Spinning by:		
Spinners only	-	-
Spinners and doublers	49	38
Spinners, weavers and finishers	51	62
Weaving by:		
Weavers only	67.7	61.4
Weavers integrated	32.3	38.6

(b) Size structure of firms (1968):

(per cent)

Spinning firms with:	
Less than 30,000 spindles	24
More than 30,000 spindles	76
Weaving firms with:	
Less than 100 looms	26.2
100-500 looms	44.4
More than 500 looms	29.4

(c) Total productive capacity concentrated in the five largest firms:

(per cent)

	1962	1968
Spinning	50	66
Weaving	26	31.5[a]

[a] 1967.

General observations

A substantial part of Belgium's cotton market has been lost to countries practising a systematic policy of abnormally low prices which has particularly affected the spinning industry.

FRANCE

Employment

Year	Spinning			Weaving		
	Manual		Non-manual	Manual		Non-manual
	Male	Female		Male	Female	
1962	15,363	23,658	3,620	23,349	27,063	8,712
1966	15,732	19,745	3,411	21,807	22,949	10,367
1967	14,118	17,763	3,301	19,911	20,871	10,172
1968	12,974	16,178	3,015	17,874	18,883	9,388

1970 (estimated): 31,000 employees in the spinning sector
34,000 employees in the weaving sector

Firms

Number of:	1960	1968
Firms	554	399
Mills	842	606

155 firms and 236 mills were closed down during 1960-1968.

Equipment

1968 - 3,516,580 spindles
60,480 looms

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	59.1	61.9	68.6	63.8	..
Weaving	50.2	60.4	55.1	54.6	..

Productivity

Labour productivity index, 1960 = 100.

1960 - 100
1962 - 113
1966 - 130
1967 - 134
1968 - 150

Investment

(Thousand dollars)

	of which: new construction
1962 - 32,290	2,443
1966 - 26,180	2,127
1967 - 23,190	2,239
1968 - 19,790*	(1,444)

*Total investment over the years 1960 to 1968 inclusive $242.2 million.

Structure of the industry (1968)

(a)

Capacity controlled in:		% of total
Spinning:	by spinners only	24.8
	by spinners integrated with others	75.2
Weaving:	by weavers only	30.8
	by weavers integrated with others	69.2

(b)

Size structure of firms and units		% of total
Spinning firms with:	less than 30,000 spindles	34
	30,000-100,000 spindles	50
	more than 100,000 spindles	16
Weaving firms with:	less than 100 looms	10.4
	100-500 looms	48.9
	500-1,000 looms	19
	more than 1,000 looms	21.7

(b) Size structure of firms and units (cont'd)

Individual units:		
Spinning units with:	less than 10,000 spindles	4.3%
	10,000-30,000 spindles	45.8%
	30,000-40,000 spindles	15.8%
	more than 40,000 spindles	34.1%
Weaving units with:	less than 50 looms	4.1%
	50-100 looms	8.1%
	100-500 looms	67.1%
	more than 500 looms	20.7%

(c) Five largest firms account for: 33.1% of total spindles
38.6% of total looms

General observations

Like a number of European industries, the French cotton industry used to find a substantial part of its outlets in Asia and Africa. It has lost a large proportion of its sales possibilities as a result of the progressive industrialization of countries that were formerly clients, and this has undoubtedly affected the evolution of this sector over the past fifteen years.

FEDERAL REPUBLIC OF GERMANY

Employment

	1962	1966	1967	1968
Total	147,376	125,223	109,591	110,064
of which:				
Male	75,068	66,033	59,267	59,696
Female	72,308	59,190	50,324	50,368
Manual	131,855	111,262	95,920	96,643
Non-manual	15,521	13,961	13,671	13,421

Firms

Number of mills in operation (only 3-4 cylinder spinning and cotton weaving):

1962 - 625
1966 - 505
1967 - 484
1968 - 454

Five new spinning mills were installed and about 210 mills were closed down during 1960-1968.

Equipment

1968: 4,529,021 spindles (only 3-4 cylinder spinning)
60,816 looms (only cotton weaving)

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	61.4	61.1	60.6	56.7	..
Weaving	54.9	56.5	57.3	56.2	..

Machine productivity

Year	Production of	
	Yarns (kgs. per spindle)	Fabrics (kgs. per loom)
1962	60	2,655
1966	66	3,280
1967	63	3,380
1968	71	3,950

Note: Data cover the entire production of the spinning and weaving mills sector, not only yarns and fabrics made of cotton.

Investment

Gross fixed investment in all branches of the cotton textile industry:

Year	Million dollars
1962	60
1966	62
1967	52
1968 (estimated)*	(62)

*Total investment over the years 1960 to 1968 inclusive approximately $548 million.

During recent years investment was largely confined to rationalization measures (60 to 70 per cent). About one third was used for replacing machinery; investments for capacity expansion were practically of no importance.

Structure of the industry

(Per cent)

	1960	1968
Spinning:		
Capacity[1] controlled by:		
Single-phase spinning and doubling mills	35	35
Mill combines (spinning-weaving)	65	65
Weaving:		
Capacity[1] controlled by:		
Single-phase weaving mills	41	42
Mill combines (weaving with spinning)	59	58

[1]Only 3-4 cylinder spinning and cotton weaving.

(Per cent)

Size structure of mills in 1968:	
Spinning mills with:	
- less than 30,000 spindles	- 24
- 30,000-100,000 spindles	- 54
- more than 100,000 spindles	- 22
Weaving mills with:	
- less than 100 looms	- 9
- 100-500 looms	- 34
- more than 500 looms	- 57

The five largest firms (mill combines) control:

- more than 23 per cent of the total productive capacity in the spinning mill sector; and

- more than 20 per cent of the total productive capacity in the weaving mill sector.

General remarks

"The advance achieved by man-made fibres (mainly synthetics) in the sectors of clothing, household textiles as well as in the industrial sector has shaken the position held by cotton in specific sectors and in some cases displaced it completely. Changed consumer habits, advertising and fashion have also played a rôle in this development. The demand for fabrics and knittings easy to clean etc.

is continually growing, not least because of women's occupational activities and because of the high cost of labour, etc. in the service sector of the economy.

"Moreover, the situation in the cotton industry is characterized by stiff competition on the national and international level. Thus the share of domestic production in the internal market of the Federal Republic of Germany has dropped to approximately 70 per cent. Because of high wages and the growing charges to be borne by employers for social benefits (the textile industry of the Federal Republic of Germany pays the highest wages within the EEC) the fierce competition of East Asian countries and Eastern bloc countries is particularly felt. This also applies to Germany's export markets for its textile products with the exception of fashionable and highly finished fabrics. To some extent, countries that formerly imported from the Federal Republic of Germany textile products have now established their own efficient cotton textile industry supplying their domestic market and today they already attempt to get a foothold in the export business."

ITALY

Employment

		1960	1968
Total		167,432	(117,198)
of which:	male	49,927	43,019
	female	117,505	74,179
	Manual	159,633	110,602
	Non-manual	7,799	(6,596)

Firms

In 1968, there were 576 firms and 690 mills in operation. Since 1960, 144 mills have been closed down.

Equipment

	1960	1968
Spindles installed	4,620,998	4,334,225
of which active	3,956,229	3,581,228
Looms installed	98,019	76,709
of which active	85,055	65,554

Utilization

3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	60.7	48.5	62.9	61.0	..
Weaving	49.4	38.5	50.0	50.5	..

Productivity

1960-1968 annual average increase in labour productivity: about 5%.

Investment

Cotton textile industry as a whole: annual average of $30.4 million for the years 1960 to 1968*

of which in:
- Spinning - about $12.8 million
- Weaving - about $ 8.0 million
- Finishing and other activities - about $ 9.6 million

Virtually all the investment has been geared to modernization of the existing plant and equipment.

*On a total of $273.6 million.

Structure of the industry

(a)

(Per cent)

	1960	1968
Capacity controlled in		
Spinning by:		
Spinners only	31.8	37.5
Spinners and weavers	68.2	62.5
Weaving by:		
Weavers only	55.1	54.7
Weavers and spinners	44.9	45.3

(b)

Size structure of individual units, 1968		% of total
Spinning units with:	less than 10,000 spindles	7.1
	10,000 - 30,000 spindles	26.4
	30,000 - 100,000 spindles	35.4
	more than 100,000 spindles	31.1
Weaving units with:	less than 50 looms	7.7
	50 - 100 looms	9.2
	100 - 500 looms	29.1
	more than 500 looms	54.0

General observations

Factors influencing the evolution of the cotton industry

The evolution of the cotton industry is characterized by rapid technological progress, requiring a very high level of financial investments, as well as by pressure of international competition whether in foreign markets or in the Italian market.

NETHERLANDS

Employment (cotton, linen and man-made fibre sectors)

	1962	1966	1967	1968
Total employed:	49,339	39,016	34,490	32,265
- Male	38,560	30,498	27,238	25,677
- Female	10,779	8,518	7,252	6,588
of which: Manual	41,735	32,179	28,065	26,032
- Male	33,528	25,846	22,780	21,263
- Female	8,207	6,333	5,285	4,769
Non-manual	7,604	6,837	6,425	6,233
- Male	5,032	4,652	4,458	4,414
- Female	2,572	2,185	1,967	1,819

Firms (cotton industry only)

Number of:	Firms	Spinning Mills	Weaving Mills
1961	84	21	94
1967	44	13	58

44 mills were closed down since 1961.

New mills built: none.

Equipment (cotton industry only)

	Spindles ('000)	Looms ('000)	Of which automatic
1962	1,013.3	31.9	17.4
1966	907.0	22.4	16.0
1967	821.4	19.6	15.0
1968	657.3	17.1	13.7

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	75.8	74.4	79.6	82.8	..
Weaving	60.8	64.6	65.2	63.7	..

Productivity (in the textile industry as a whole)

Per production worker, index (1960 = 100)

1960 - 100

1962 - 106

1966 - 137

1967 - 137

Investment (cotton, linen and man-made fibre sectors)

(Million dollars)

Year	Total investment	Of which: in machinery and other fixed capital expenditures
1962	18.6	14.9
1966	13.8	11.2
1967*	11.4	9.2
1968*	..	..

*Total investment over the years 1960 to 1967 inclusive $107 million.

Structure of the industry

Structure of firms and units	1962			1968		
	No. of firms	No. of spindles (1000)	% of total capac.	No. of firms	No. of spindles (1000)	% of total capac.
1. Spinning firms with:						
less than 40,000 spindles	10	193.4	19	7	182.6	28
40,000 to 100,000 spindles	9	468.4	46	-	-	-
More than 100,000 spindles	2	351.6	35	2	474.8	72
Total	21	1,013.3	100	9	657.3	100

Structure of firms and units	1962			1963		
	No. of units	No. of spindles ('000)	% of total capac.	No. of units	No. of spindles ('000)	% of total capac.
Individual units with:						
Less than 40,000 spindles	10	193.4	19	8	194.8	30
40,000 to 100,000 spindles	9	468.4	46	3	138.3	21
More than 100,000 spindles	2	351.6	35	2	324.2	49
Total	21	1,013.3	100	13	657.3	100
2. Weaving firms with:	No. of firms	No. of looms ('000)	% of total capac.	No. of firms	No. of looms ('000)	% of total capac.
Less than 100 looms	27	1.4	5	24	1.4	8
100-500 looms	30	7.8	24	13	3.2	19
More than 500 looms	18	22.6	71	7	12.5	73
Total	75	31.9	100	44	17.1	100
Individual units with:	No. of units	No. of looms ('000)	% of total capac.	No. of units	No. of looms ('000)	% of total capac.
Less than 50 looms	..	..	..	12	0.4	2
50-100 looms	..	..	..	14	1.1	7
More than 100 looms	..	..	..	32	15.6	91
Total	94	31.9	100	58	17.1	100

General observations

In recent years, the cotton industry has kept in step with technical developments in the field of equipment and production methods. Market surveys make it possible to keep production constantly adjusted to consumer preferences.

Because of developments within the EEC, the cotton industry is fully aware of the need for concentration and integration. In recent years many amalgamations have therefore taken place, as a result of which approximately 6 per cent of total undertakings in the Netherlands have a share of the market equivalent to 60 to 70 per cent of the total, owning 86 per cent of spinning capacity and 72 per cent of weaving capacity. This development makes it possible to face international competition increasingly well.

FINLAND

Employment

	1962	1966	1967	1968
(a) Male	1,397	1,118	1,136	1,116
Female	4,800	3,370	3,422	3,202
Total	6,197	4,488	4,558	4,318
(b) Manual	5,944	4,260	4,334	4,095
Non-manual	253	228	224	223
Total	6,197	4,488	4,558	4,318

Firms

Number of mills in operation in 1968:

Four firms with five mills in the spinning sector and seven mills in the weaving sector.

One spinning mill has been closed down in 1967.

New mills built: none.

Equipment

Active machinery in the cotton industry in 1968:

182,580 spindles
4,516 looms

Utilization - three shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	55.8	60.7	71.1	72.2	..
Weaving	56.9	51.1	63.2	63.0	..

Productivity

Labour productivity index (weight of yarns and fabrics produced per annum per worker), 1961 = 100.

	Spinning	Weaving
1961	100	100
1962	98	113
1966	139	178
1967	138	183
1968	144	189

Investment

Not available.

Structure of the Industry

(a)

Spinning firms with:	% of total
Less than 30,000 spindles	22
30,000-100,000 spindles	18
More than 100,000 spindles	60
	100
Weaving firms with:	
100-500 looms	19
More than 500 looms	81
	100

(b)

Spinning mills with:	
Less than 10,000 spindles	5
10,000-30,000 spindles	22
More than 30,000 spindles	73
	100
Weaving mills with:	
More than 100 looms	100

Note: Five per cent of the total cotton loom capacity in mills outside the "Association of Finnish Cotton Mills" are not covered by these figures.

NORWAY

Employment

Cotton and rayon textile industries

	1960	1967	1968
Male	1,916	2,015	1,669
Female	1,628	1,507	1,116
Total	3,599	3,522	2,785

Firms

There are seven cotton mills in operation; all of them were built before 1960.

Equipment

1968 - 65,016 spindles[1]
of which: 51,060 active spindles

1,363 looms (1,247 automatic)
of which: 1,222 active (1,138 automatic)

[1] In addition, there are 28,300 spindles used in spinning of yarns other than cotton.

Utilization - three shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	69.3	82.9	83.9	79.8	..
Weaving	53.9	51.0	51.6	55.7	..

Productivity

Not available.

Investment

Total investments in the cotton textile industry

1960-1967: $20.3 million
Annual average: $2.5 million (fluctuated from $2-$3 million)
1967 investment: $2.3 million

Investment has gone into maintenance and modernization of existing plants and replacement of equipment.

Size structure of firms and units, 1968:

Firms with:	
Less than 30,000 spindles	- 5 firms (100%), 93,500 spindles (100%)
Less than 100 looms	- 1 firm (14%), 46 looms (3%)
100-500 looms	- 6 firms (86%), 1,346 looms (97%)
Individual units with:	
Less than 10,000 spindles	- 1 unit (20%), 8,712 spindles (9%)
10,000-30,000 spindles	- 4 units (80%), 84,778 spindles (91%)
Less than 50 looms	- 1 unit (14%), 46 looms (3%)
More than 100 looms	- 6 units (86%), 1,346 looms (97%)

Three largest firms have 62,348 spindles (67% of the total) and 562 looms (40% of the total).

SWEDEN

Employment

	1962	1966	1967	1968
Manual: Male	5,997	4,471	4,273	..
Female	4,941	3,173	2,956	..
Total	10,938	7,644	7,229	..
Non-manual: Male	1,353	969	874	..
Female	519	373	334	..
Total	1,872	1,342	1,208	..

Firms

	1962	1966	1967	1968
Number of mills in operation[1]	63	61	59	..

Number of mills built in 1960-68 - 3[2]
Number of mills closed down in 1960-68 - 6[2]
Number of firms 1967-69 - 7[2]

[1] According to the official Swedish statistics.

[2] According to the Swedish Cotton Manufacturers' Association.

Equipment

	1966	1967	1968
Number of active machinery in the cotton industry			
Spindles	370,000	190,000	170,000
Looms	7,200	3,600	3,400

Utilization - three shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	49.6	56.6	52.5	54.7	..
Weaving	59.1	61.7	52.3	55.0	..

Productivity

The rise in productivity is believed to be near 50 per cent during the 1960's taking also quality improvements into consideration.

Investment

Not available.

Structure of the industry

(a) Percentage of spinning and weaving capacity controlled in 1967 by:

1. spinners and doublers - 22 per cent
   spinners, doublers, weavers and finishers - 75 per cent

2. weavers and finishers - 5 per cent
   weavers controlling both spinning and finishing, as well as other activities - 95 per cent

(b) Size structure of firms and units:

Firms with:

- Less than 30,000 spindles: 48 per cent; 100 looms: 2 per cent
- Between 30,000 and 100,000 spindles: 52 per cent; 100-500 looms: 22 per cent
- More than 100,000 spindles: 0 per cent; 500 looms: 76 per cent

Mills with:

- Less than 10,000 spindles: 14 per cent; 50 looms: 0 per cent
- Between 10,000 and 30,000 spindles: 52 per cent; 50-100 looms: 2 per cent
- More than 30,000 spindles: 34 per cent; 100 looms: 98 per cent

(c) Ninety-five per cent of total productive capacity is concentrated in the five largest firms.

General observations

"The man-made fibres are becoming more and more important within the Swedish textile industry. This development partly favours the cotton textile industry. In some lines of production, however, firms outside the cotton textile industry, which are specialized in the manufacturing and marketing of man-made fibres, are making progress at the expense of the cotton textile industry.

"At the same time, knitted goods are making great progress in the Swedish textile market. Knitted fabrics are in many cases replacing woven fabrics. Several cotton textile firms have already installed units for knitted goods and these are likely to increase in size and number. Knitted fabrics are now mainly manufactured from continuous man-made fibres, which of course is disadvantageous for existing spinning mills. However, it is possible that in the future discontinuous man-made fibres or natural fibres will be used to a larger extent in the manufacturing of knitted fabrics. In this case, the spinning mills would be needed for an increased production of yarns for knitted goods.

"The Swedish cotton textile industry is comparatively small. So is the Swedish home market. As a result of Sweden's liberal trade policy the Swedish textile market has for a long time been open for cotton textiles from other countries. As a result, competition has grown extremely hard and the market share of the Swedish cotton textile industry has decreased. The industry therefore has been forced to increase its sales on the export markets.

"It has been pointed out in the Cotton Textile Committee that restrictions in one market normally lead to a diversion of trade flows to other more open markets and that countries with these open markets would have difficulties in maintaining a liberal import policy under conditions where restrictions continue to be widespread."

UNITED KINGDOM

Employment

(a) (Thousands, estimates at October each year)

	Year	Manual		Non-manual		Total	
		Males	Females	Males	Females	Males	Females
Spinning and doubling on the cotton and flax system:							
	1962	33.3	62.5	5.6	3.2	38.9	65.7
	1966	33.1	53.2	5.7	3.5	38.8	56.7
	1967	30.2	43.6	5.1	3.1	35.3	46.7
	1968	33.4	42.4	5.3	3.4	38.7	45.8
Weaving of cotton, linen and man-made fibres:							
	1962	37.2	54.9	6.2	4.4	43.4	59.3
	1966	34.3	44.4	5.8	4.1	40.1	48.5
	1967	29.6	36.6	5.3	3.7	34.9	40.3
	1968	28.9	34.4	5.4	4.0	34.3	38.4
Textile finishing:							
	1962	42.9	18.7	7.8	4.5	50.7	23.2
	1966	37.2	16.9	7.0	4.3	44.2	21.2
	1967	34.5	15.5	7.2	4.2	41.7	19.7
	1968	35.7	16.3	7.3	4.6	43.0	20.9

(b) (Thousands, at June each year)

	1962	1966	1967	1968
Registered as unemployed:				
Spinning and doubling of cotton, flax and man-made fibres	5.2	0.9	3.4	1.9
Weaving of cotton, linen and man-made fibres	5.0	0.7	3.8	1.4

Firms

Total number of firms in October 1968: 469 (spinners, waste spinners, doublers, weavers and finishers).

	1962	1966	1967	1968	Total (1962-68)
Mill closures	51	64	94	49	401

Equipment

Changes in the cotton textile industry, 1960-1968:

		1960	1968
		Spindles[3]	
In place[1]:	Spinning (millions)[2]	9.19	3.86
	Waste spinning (thousands)	726	428
	Doubling (thousands)	1,506	840
of which:			
Running:	Spinning[2]	8.11	3.47
	Waste spinning	655	395
	Doubling	1,256	693
		Looms	
Running[4]	(thousands)	149.4	78.5[5]

[1] In running mills.

[2] Ring equivalent.

[3] Averages.

[4] On cotton and/or man-made fibre fabrics.

[5] Includes looms running on silk.

1970 estimate:

Spindles - 3.0 to 3.5 million
Looms - 60 to 70 thousand

Utilization - three shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Spinning	41.0	47.8	46.7	45.7	..
Weaving	43.7	45.8	45.7	43.0	..

Productivity

(Output per head)

	Spinning		Weaving[2]		Weaving
	'000 lb.	Index[1]	'000 lb.	Index[1]	'000 sq. yds.
1962	9.39	93	7.5	90	21.5
1966	12.01	120	9.0	108	25.3
1967	11.93	119	9.3	112	25.0
1968	13.12	131	10.4	125	27.1

[1] 1960 = 100.

[2] Estimated on basis of yarn consumed.

Note: Includes spun man-made fibre yarn and man-made fibre cloth.

Investment in (i) spinning and doubling of cotton, flax and man-made fibre (includes processing of man-made cotton fibre yarn);
(ii) weaving of cotton, linen and man-made fibres; and
(iii) textile finishing.

(Million dollars, gross)

	1962	1966	1967[1]
Fixed capital expenditure	72.8	82.3	90.4
New buildings	9.5	13.4	14.0
Plant and machinery	59.6	63.0	71.1

[1] Converted for the whole of the year by the pre-devaluation rate.

Total investment over the years 1960 to 1967 inclusive, about $616 million.

Structure of the industry

		No. of firms	Spindles[1] ('000)	%
(a)	Firms (mill combines):			
	Spindles (ring equivalent) - Spinning firms with:			
	- less than 30,000	33	491	13.1
	- 30,000-100,000	25	1,457	38.9
	- over 100,000	5	1,800	48.0
	Total	63	3,748	100.0
	Looms - Weaving firms with:			
	- less than 100	105	5	5.7
	- 100-500	132	31	35.2
	- over 500	42	52	59.1
	Total	279	88	100.0
(b)	Individual units:			
	Spindles (ring equivalent) - Spinning units with:			
	- up to 10,000	22	94	2.5
	- 10,000-30,000	60	1,223	32.6
	- over 30,000	51	2,431	64.9
	Total	133	3,748	100.0
	Looms - Weaving units with:			
	- less than 50	84	2	2.3
	- 50-100	58	4	4.5
	- over 100	251	82	93.2
	Total	393	88	100.0

[1] Position at October 1968.

(c) At October 1968 the five largest firms (by employment) accounted for:

Per cent	Of total:
39.7	Employment
46.5	Spinning spindles in place
25.5	Waste spinning spindles in place
40.0	Double spindles in place
21.4	Looms in place

The proportion of spinning and weaving capacity

Controlled by:	Percentages 1960	1968
Spinners only	22.3	24.4
Spinners and doublers	12.5	11.2
Spinners, doublers, weavers and finishers	65.2	48.1
Weavers	58.4	43.7
Weavers, spinners, doublers	41.6	14.0
Weavers, finishers		11.7
Weavers, spinners, finishers		30.6

Other relevant quantitative information

(a) Proportion of productive capacity being worked on two and three shifts (per cent):

	1961		1968	
	Spinning	Weaving	Spinning	Weaving
2 shifts	20.9	21.4	33.7	24.4
3 shifts	2.3	11.0	25.9	23.3

General observations

"The United Kingdom cotton industry has had to face increasingly severe competition from imported fabrics. In 1964 the total home market availability (production minus exports plus imports) of cotton fabrics amounted to 1,709 million square yards, of which imports accounted for 44.8 per cent. In 1968, the total home market availability of cotton fabrics had fallen to 1,385 million square yards, of which imports accounted for 52 per cent.

"There has been a great expansion in demand for filament yarn, production of which has increased from a 1958 figure of 191 million lb. to 517 million lb. in 1968. Also, consumption of filament yarn in the warp-knitting process has increased from 16 million lb. in 1958 to 77 million lb. in 1968. The consumption of filament yarn in the weft-knitting process has increased from 18 million lb. in 1958 to 115 million lb. in 1968.

"The increase in demand for warp and weft-knitted products and an associated increase in demand for man-made fibres has been largely at the expense of the cotton textile market."

UNITED STATES

Employment

Year	Cotton weaving mills					Cotton finishing mills		
	All employees			Production workers	Other	All employees	Production workers	Other
	Total	Men	Women					
1962	238,900	147,700	91,200	222,100	16,800	42,428	36,065	6,363
1966	237,200	145,400	91,800	218,000	19,200	35,133	29,475	5,655
1967	236,200	143,500	92,700	216,600	19,600	35,000 1/	29,000	6,000
1968	232,900	139,900	93,000	212,500	20,400	..	..	..
1968 Index (1962 = 100)	97	95	102	96	121	82 2/	80 2/	94 2/

1/ Preliminary data.
2/ Index 1967 (1962 = 100).

Note: Data for the cotton spinning sector not available. Average annual decline of 1 per cent in cotton weaving mills and more than 4 per cent in cotton finishing mills (estimate for 1970: 221,000 and 30,000 employees, respectively).

Equipment

Year	Cotton system spindles 1/ (thousands)				Looms producing 1/ cotton fabrics (number)	Of which automatic & semi-auto. (per cent)
	Total	Using 100% cotton	Using 100% man-made fibres	Using other fibres		
1962	18,799	16,795)	Reported under	2,004	297,540	100.0
1966	19,317	14,869)	"other"	4,448	252,012	100.0
1967	19,898	14,923	1,434	3,541	241,029	100.0
1968	20,125	13,601	1,799	4,725	217,647 2/	100.0

1/ Average annual decline in spindles was 3 per cent and in looms about 4.5 per cent. For 1970, the number of cotton system spindles is estimated at 12.8 million.

2/ Average number active during the first three quarters of 1968.

Note:
The figures given refer to total, not to the number of active spindles and looms.

Utilization

Machinery utilization: 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967	1968
Weaving	99.24	109.19	114.55	109.92	..
Spinning	103.60	104.64	107.63	100.40	..

Productivity

Cotton spinning - not available.

Cotton weaving mills: The industry output per production worker in constant dollars increased 36 per cent from 1960 to 1966 or at a compound annual rate of 5.3 per cent. The largest annual increase was the 9.5 per cent growth recorded in 1961 and the smallest 1.9 per cent, in 1966.

Investment

(Thousand dollars)

Year	Cotton weaving mills industry			Cotton finishing industry		
	Total	Plant	Machinery	Total	Plant	Machinery
1962	114,815	20,789	94,026	..	..	..
1966	222,034	53,624	168,410	27,646	4,705	22,941
1967	168,000 1/	..	..	26,000	..	..
1968	..	..	..	..	..	..

1/ Preliminary data.

Total investment over the period 1963 to 1968 in cotton weaving mills and cotton finishing industry $958.7 million.

Note: Data for other sectors not available.

Other relevant quantitative information

Firms and establishments according to census of manufactures

	1958		1963	
	Firms	Establishments	Firms	Establishments
Cotton weaving mills industry	325	496	229	407
Cotton finishing industry	426	446	220	238

Note: Data for other sectors not available.

General observations

"Consumer preferences, textile technology, and international competition are expected to be important determinants of United States cotton textile activity. Aggressive marketing of man-made fibre textiles, both domestically and abroad, has had a substantial impact on the use of cotton textiles. It is expected that strong competition from man-made fibre textiles will continue and that consumers will continue to demand some of the special advantages thus far available only in man-made fibre textiles. The ability of cotton products to compete with man-made fibre items will depend largely on the development of improved durable press characteristics in cotton textiles without sacrificing wearing qualities. Work is going on in this field."

HONG KONG

Employment

		1962	1966	1967	1968
(a)	Spinning, total:	19,269	20,101	21,525	21,670
	of which: Manual	..	18,942	20,290	20,952
	Male	..	10,151	11,062	11,191
	Female	..	8,791	9,228	9,161
	Non-manual	..	1,159	1,235	1,318
	Male	..	1,054	1,137	1,210
	Female	..	105	98	108
	Weaving, total:	25,619	31,277	30,623	31,609
	of which: Manual	..	29,416	28,755	29,709
	Male	..	12,929	12,724	13,085
	Female	..	16,487	16,031	16,624
	Non-manual	..	1,861	1,868	1,900
	Male	..	1,667	1,678	1,710
	Female	..	194	190	190

(b) Estimated number of employees in 1970: 56,000 (in cotton spinning and weaving industries combined).

Firms

	Cotton spinning		Cotton weaving	
	Number of firms	Number of mills	Number of firms	Number of mills
1962	31		176	263
1966	32	33	170	237
1967	31	33	190	255
1968	31	33	..	260

Equipment

Year	Active spindles	Active looms
1962	631,992	19,619
1966	749,362	22,016
1967	767,330	23,148
1968	781,488	..

Estimated number of spindles in 1970: 882,000
Estimated number of looms in 1970: 25,000

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967
Spinning	135.5	131.6	135.5	133.6
Weaving	..	131.6	135.5	133.6

Productivity

Year	Average annual production (in lb.) in cotton spinning per manual worker	Average annual production (in sq. yds.) in cotton weaving per manual worker
1962 1/	12,220.58	19,864.04
1966	15,422.16	22,907.63
1967	14,915.30	25,491.60

1/ 1962 average included manual and non-manual employees.

Investment

Imports of textile machines (in thousand dollars, re-exports excluded)

1962	-	8,186
1966	-	12,333
1967	-	12,960
1968	-	12,962

There is no information available on gross fixed investment.

Total imports of textile machines over the years 1960 to 1968 inclusive $118.5 million.

Structure of the industry (1967)

(a)

Spinning firms with:	Number of firms	Number of spindles	% of total
Less than 50,000 spindles	23	403,870	52.6
30,000-100,000 spindles	8	363,460	47.4
More than 100,000 spindles	-	-	-
Total	31	767,330	100.0

Weaving firms with:	Number of firms	Number of looms	% of total
Less than 100 looms	123	4,213	18.2
100-500 looms	56	11,682	50.5
More than 500 looms	11	7,253	31.3
Total	190	23,148	100.0

(b) Percentage of the total productive capacity concentrated in the five largest firms:

Year	Spinning	Weaving
1965	35.9%	17.4%
1966	35.2%	17.9%
1967	34.4%	16.8%
1968	34.3%	..

INDIA

Employment

(thousands)

Year	Male	Female	Total
1962	874	55	929
1966	884	47	931
1967	883	45	928
1968	871	43	914

Firms

There are at present 636 cotton mills, of which 157 were commissioned during 1960-1968.

Equipment

(a) 1968 - 13.74 million spindles
177,000 looms

(b) Newly installed, 1960-1968:

			Modernization	Expansion
Spindles	- 5.8 million	of which:	2.05 million	3.75 million
Looms	- 49,000	of which:	40,000	9,000

Utilization

3 shifts (6,200 hours = 100)

	1960	1965	1966	1967
Spinning	82.2	84.7	82.4	75.6
Weaving	77.3	78.5	78.7	70.5

Productivity

(per worker per annum)

	1960	1967
Yarn production	2,618 kgs.	2,978 kgs.
Cloth production	1,966 kgs.	2,023 kgs.

Investment

During 1960-1965, 256 companies (accounting for 80 per cent of the total) invested $510.3 million. On this basis it is estimated that the total investment by the entire industry was $638.4 million. Data on investment in the subsequent years are not available.

Structure of the industry

(per cent)

	1960		1968	
	Firms	Spindles	Firms	Spindles
(a) Firms				
Spinning firms with:				
less than 30,000 spindles	62.9	32.1	63.9	32.8
30,000-100,000 spindles	33.9	51.6	31.9	47.2
more than 100,000 spindles	3.2	16.3	4.2	20.0
	100.0	100.0	100.0	100.0
	Firms	Looms	Firms	Looms
Weaving firms with:				
less than 100 looms	4.4	0.4	3.5	0.2
100-500 looms	38.5	17.6	33.5	13.8
more than 500 looms	57.1	82.0	63.0	86.0
	100.0	100.0	100.0	100.0

Percentage of total productive capacity concentrated in the five largest firms:

Spindles	7 per cent
Looms	5 per cent

(per cent)

	1960	1968
(d) Percentage of capacity controlled in:		
Spinning by:		
Spinners only	25.0	31.0
Spinners and weavers	12.0	11.0
Spinners, weavers and finishers	63.0	58.0
	100.0	100.0
Weaving by:		
Weavers and spinners	13.0	10.0
Weavers, spinners and finishers	87.0	90.0
	100.0	100.0

PAKISTAN

Workers employed	1960	1968
	148,227	195,181

Estimated number of workers in 1970: 200,000.

Firms

Number of mills in operation in 1968:	137
Number of mills built during 1960-68:	47
Number of mills closed down during 1960-68:	5

Equipment	1968
Spindles	2,749,681
Looms	36,803
Number of spindles and looms installed 1960-68:	
Spindles	761,000
Looms	6,000

Estimated number in 1970:

Spindles	3,550,000
Looms	43,457

Utilization - 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967
Spinning	115.5	101.2	100.6	104.1
Weaving	93.9 1/	75.2	75.8	82.7

1/ 1961.

Productivity

Information not available.

Investment

Information not available.

Structure of the industry

Percentage of total productive capacity concentrated in the five largest firms:

Spinning	-	13.62%
Weaving	-	19.76%

CHINA (TAIWAN)

Employment

	1960	1968	1970
Total workers[1]	31,200	63,000	100,000
of which:			
Male	1,200	3,000	
Female	30,000	60,000	

[1] Estimate.

Firms

Fifty-eight firms and mills are in operation. Thirty mills were built in 1960-68. Mills closed down since 1960 - none.

Equipment

1968 - 750,000 spindles and 25,000 looms.

1960-1968 - 350,000 spindles and 15,000 looms were installed and 50,000 spindles were modernized.

Estimate for 1970: spindles - 900,000, looms - 30,000.

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967
Spinning	..	65.1	97.9	101.2
Weaving	..	108.4	108.4	108.4

Productivity

Average labour productivity is estimated to have increased in 1960-1968 by approximately 10 per cent.

Investment

Gross fixed investment during 1960-68 averaged approximately US$5 million per annum.

Structure of the industry

(a) (Per cent)

	1960	1968
Spinning capacity controlled by:		
Spinners only	10	7
Spinners and doublers	20	30
Spinners, doublers and weavers	45	50
Spinners, doublers, weavers and finishers	25	13
Weaving capacity controlled by:		
Weavers only	70	50
Weavers, spinners and doublers	25	45
Weavers and finishers	5	5

(b) Firms controlling in 1968:

Less than 30,000 spindles and 100 looms - about 41 per cent.
30,000-100,000 spindles and 100-500 looms - about 44 per cent.

(c) Percentage of total productive capacity concentrated in the five largest firms - about 31 per cent.

REPUBLIC OF KOREA

Employment

(a)

	1960	1968
Males	3,221	4,521
Females	15,393	24,047
Total	18,614	28,568

Note: These figures cover only the seventeen large-scale enterprises. Numbers employed in small and medium-sized firms are not yet ascertained but can be roughly estimated at some 10,000 persons.

(b) Estimated number of employees in large-scale mills in 1970: about 35,000 persons.

Firm

Number of mills in operation (only the large-scale mills referred to above):

1960 - 15; 1968 - 17

Three mills were newly built and one was closed down in the period 1960-1963.

Equipment

(a) Active spindles and looms in place:

	1960	1968
Spindles	469,648	759,512
Looms	10,054	9,473

Note: The above figures refer only to the seventeen large-scale mills which form the Korean Spinners and Weavers Association. As regards weaving capacity, some 11,400 additional looms (mostly obsolete and outmoded ones) are estimated to be in place in a number of small- and medium-sized mills which roughly accounted for about 40 per cent of the total production of cotton fabrics in 1968.

(b) Estimate for 1970:

Spindles	1,100,000	
Looms	15,000	(in large-scale mills only)

Utilization - three shifts (6,200 hours = 100)

	1960	1965	1966	1967
Spinning	82.7	99.7	109.5	109.7
Weaving	49.6	73.9	77.0	92.1

Productivity

Labour productivity

	1960	1968
Spinning Cotton yarn (Eng. Count No.20) produced per person[1]	13.25 kgs.	23.42 kgs.
Weaving Cotton cloth produced per person[1]	50.50 metres	88.38 metres

[1]For eight-hour shift.

Investment - Not available.

Structure of the industry (1968)

(a) Proportion of spinning capacity controlled by:

	No. of mills	Spindles	%
Spinners only	6	155,944	20.5
Spinners and weavers	11	603,568	79.5
Total	17	759,512	100.0

Proportion of weaving capacity controlled by:

	No. of mills	Looms	%
Weavers only	-	-	-
Weavers and spinners	11	9,473	100.0

(b) Size structure of mills

	No. of mills	Spindles	%
Spinning mills with:			
Less than 30,000 spindles	5	65,072	8.6
30,000-100,000 spindles	11	585,640	77.1
More than 100,000 spindles	1	108,800	14.3
Total	17	759,512	100.0

	No. of mills	Looms	%
Weaving mills with[1]:			
Less than 100 looms	-	-	-
100-300 looms	3	792	8.35
More than 500 looms	8	8,681	91.65
Total	11	9,473	100.00

[1]Refer only to the large sized mills concurrently equipped with spinning facilities. Small- and medium-sized mills, which are estimated to operate some 11,400 looms in aggregate, are mostly with weaving capacity of less than 100 looms.

(c) Concentration in five largest mills:

Spindles - 377,632 (49% of the total)
Looms - 6,670 (71% of the total)

TURKEY

Employment

	1963	1964	1965	1968
Total	76,575	69,642	92,418	103,179
of which:				
Female - about 40 per cent				

1970 estimate: 110,000.

Firms

1968: 81 firms and mills in operation, plus 170 small-scale mills. Since 1960, ten new mills have been built and four mills were closed down.

Equipment

	Spindles	Looms
In place 1968	1,156,258	22,312
Installed since 1960	103,432	302
Estimate for 1970	1,500,000	30,000

Utilization 3 shifts (6,200 hours = 100)

	1960	1965	1966	1967
Spinning	98.0	96.8	96.8	96.8
Weaving	87.0	96.8	96.8	96.8

Investment

Gross fixed investment, (in thousand dollars):

1962 - 13,845
1963 - 14,677
1964 - 11,138
1965 - 15,736

of which annually:

new machines and installations - 80 per cent

modernization - 20 per cent

Size structure of mills, 1968

	Number of mills
Spinning mills with:	
- less than 10,000 spindles	36
- 10,000-30,000 spindles	37
- 30,000-100,000 spindles	8
Weaving mills with:	
- less than 50 looms	141
- 50-100 looms	7
- 100-500 looms	36
- more than 500 looms	12

ADJUSTMENTS IN THE COTTON TEXTILES INDUSTRY
- COT/W/110 -

Questionnaire for Completion by Countries Participating in the Cotton Textiles Arrangement

Note by Director-General

1. At their twenty-fourth session, the CONTRACTING PARTIES invited governments to report the measures they had taken to facilitate adjustments in their respective cotton textile industries. The reports received were circulated in document COT/105 and Add.1 When the Cotton Textiles Committee reviewed these reports at its meeting in October 1968, it came to the conclusion that, useful as the reports were, they would need to be supplemented by additional information. The Committee therefore decided that the secretariat, in consultation with delegations, should prepare a study on adjustment policies as well as on the adjustments that had actually occurred in the cotton textile sector. To enable the secretariat to obtain the information required for the preparation of the study, a questionnaire has been prepared and is attached hereto.

2. Both importing and exporting countries participating in the Arrangement Regarding International Trade in Cotton Textiles are invited to complete the questionnaire and return it to the secretariat as soon as possible and in any case by 31 March, so as to enable a first draft of the secretariat study to be circulated by July 1969 (cf. L/3120, paragraph 96 and SR.25/7).

QUESTIONNAIRE ON ADJUSTMENTS IN THE COTTON TEXTILE INDUSTRY

I. Measures for Facilitating Adjustments in the Cotton Textile Sector

1. What are the measures taken by your Government since 1960 to facilitate adjustments in the domestic cotton textile industry? Please give details of these measures including, wherever applicable, information on the following points:

(a) compensation for scrapping obsolete equipment, grants or credits for modernization and re-equipment (give details also of the procedure and, in cases where some special organization is set up for this purpose, the organization);

(b) institutions or funds established by legislation, or otherwise, to provide finance facilities;

(c) reduced interest rates, State guarantees for credits;

(d) accelerated depreciation allowances or tax advantages;

(e) production and trade subsidies;

(f) measures for diversifying employment opportunities in areas where cotton textile mills provide an exceptionally large proportion of total employment;

(g) training and retraining programmes;

(h) research and other measures for increasing productivity;

(i) other.

2. Does your Government contemplate the introduction of any of the above measures or any other measures for facilitating adjustment in the cotton textile industry? If so, what measures?

3. Are the adjustment measures taken so far, or contemplated to be taken, applicable only to the cotton textile industry, or also to other industries or to industry generally?

4. Apart from Government measures, what adjustment measures have been taken by the cotton textile industry itself?

5. If no special measures have been taken for facilitating adjustment in the cotton textile industry, what are the reasons?

6. If there have been cases where the Government or industry tried to take systematic measures for facilitating adjustment and these failed to materialize, what are the reasons for the failure and what steps are being taken to make these measures effective in the future?

II. Changes in the Cotton Textile Industry and Trade Over the Period 1960 to 1968

(Please provide data for each of these years, or, where such data have already been supplied to the secretariat in different contexts, please indicate, as well as any corrections that might be required to data submitted earlier.)

1. Number of active spindles and looms in place in 1968. How many of these in place at the present time were installed during this period? How many were modernized?

2. Number of firms and mills in operation? How many mills have been built since 1960? How many mills were closed down since that time?

3. The structure of firms (mill combines) and individual units:

   (a) what percentage of spinning and weaving productive capacity consists of firms (mill combines) controlling less than:

   30,000 spindles, 100 looms;
   from 30,000 to 100,000 spindles and 100 to 500 looms;
   more than 100,000 spindles and 500 looms;

   (b) what percentage of spinning and weaving productive capacity consists of individual units controlling:

   less than 10,000 spindles and 50 looms;
   from 10,000 to 30,000 spindles and 50 to 100 looms;
   more than 30,000 spindles and 100 looms;

   (c) what percentage of total productive capacity is concentrated in the five largest firms (mill combines)?

4. The proportion of spinning capacity controlled in 1968 and, where data exist, in 1960, by:

   spinners only
   spinners and doublers
   spinners, doublers and weavers
   spinners, doublers, weavers and finishers;

The proportion of weaving capacity controlled, in 1968 and 1960, by:

weavers only
weavers, spinners and doublers
weavers and finishers
weavers controlling both spinning and finishing, as well as other activities.

5. Can you indicate the annual amounts of gross fixed investment in the cotton textile industry of your country during the period 1960 to 1968?

6. What part of these investments represents the construction of new mills and what part has been geared to modernization of the existing plant and equipment?

7. Can you indicate the repartition of this gross fixed investment by the main sectors (i.e. spinning, weaving, finishing, etc.) of the cotton textile industry?

8. Numbers employed in the cotton textile industry, 1960-1968, broadly defined:

(a) male - female;

(b) manual - non-manual.

9. To what extent is the cotton textile industry concentrated in a few areas? What proportion of employment in these areas is provided for by the industry?

10. If there has been a fall in employment in the cotton textile sector, has this fall been accompanied by a rise in unemployment?

11. What proportion of productive capacity has been worked on two and three or more shifts system in 1960 and 1968?

12. What increases have taken place in labour productivity in cotton spinning and weaving over the period 1960 to 1968 in terms of the weight of yarn and fabrics produced per annum and/or the value of net output per head, suitably adjusted for price changes?

13. Changes in mill consumption (in tons) of raw cotton over the period 1960 to 1968?

14. Consumption of yarn (cotton, blended and spun and filament man-made fibre yarn) in cotton weaving?

15. Consumption (or where not available, domestic deliveries) of cotton yarn in the knitting and in the carpet industries?

16. Production of cotton yarn (state average count) and fabrics in metric tons?

17. Estimated consumption of cotton yarns in different end-uses (as a percentage of total such yarn consumption) in:

(a) apparel fabrics

(b) household textiles

(c) industrial textiles.

18. Imports and exports, quantity (metric tons) and value ($'000), over the period 1960 to 1968 of:

(a) cotton yarns

(b) grey cotton fabrics

(c) bleached etc. cotton fabrics

(d) made-up cotton fabrics

(e) cotton clothing

(f) miscellaneous cotton textiles.

(To the extent that these data have already been notified for purposes of the COT/STAT/ series and to the extent that these data do not require correction, statistics for the categories and years concerned need not be re-submitted.)

19. Percentage of cotton items (i.e. products in which cotton represents more than 50 per cent, by weight, of fibre content) in total imports and exports of:

(a) yarns

(b) fabrics

(c) textiles generally

(d) clothing.

20. Estimated changes in consumption of cotton yarns and fabrics by 1970 as compared with 1968 (or last year for which complete statistics are available)?

21. Estimated number of cotton spindles and looms in the cotton industry in 1970?

22. Estimated number of workers required by the cotton industry in 1970?

III. General Observations

including factors other than specific governmental or industry-wide measures which you consider influenced changes in the cotton textile industry in recent years (such as, changes in textile technology, consumer preferences, merger movements in industry, international competition, etc.).